

TAXONOMIC NOTES ON SOUTH AMERICAN *POGONOCEROMORPHUS* PIC
(COLEOPTERA), INCLUDING TRANSFER FROM PYROCHROIDAE
(PYROCHROINAE) TO ANTHICIDAE (EURYGENIINAE)

DANIEL K. YOUNG

Department of Entomology, University of Wisconsin, Madison, Wisconsin 53706,
U.S.A. (email: young@entomology.wisc.edu)

Abstract.—*Pogonoceromorphus* Pic is transferred from Pyrochroidae (Pyrochroinae) to Anthicidae (Eurygeniinae). Type material for *Pogonoceromorphus gracilis* Pic is discussed and a syntype confirmed. *Pogonoceromorphus lauiopalui* Vulcano and Pereira is transferred to *Disema* Mäklin (Tenebrionidae: Lagriinae (**n. comb.**)). Salient anatomical characters supporting the proposed changes are discussed.

Key Words: *Pogonoceromorphus gracilis*, *Pogonoceromorphus lauiopalui*, Pyrochroidae (Pyrochroinae), Anthicidae (Eurygeniinae), *Disema*, Tenebrionidae (Lagriinae), South America

Recent years have seen activity directed toward better defining generic concepts within the pyrochroine Pyrochroidae (Young 1999, 2002, 2004a, b). This paper continues the process of reviewing generic relationships of Pyrochroinae in an effort to redefine the subfamily and genera therein as monophyletic taxa. This paper proposes taxonomic changes involving the two species presently comprising *Pogonoceromorphus* Pic.

At the time of its description (Pic 1921), *Pogonoceromorphus* was monotypic, the only species being *P. gracilis* (Figs. 1–2) from “Maroni” in French Guiana. It was said to most closely resemble the pyrochroid genus *Pogonocerus* Fischer (Figs. 3–4), differing by its more elongate, apically constricted prothorax with a basal sulcus, and by the third antennomere bearing a long, thin ramus. Aside from being listed in two catalogues (Blair 1928, Blackwelder 1945), nothing else was published on *Pogonoceromorphus* until Vulcano and Pereira (1972) described *Pogonoceromorphus lauiopalui* from Jacareacanga, Brazil.

METHODS AND MATERIALS

Depositories and collection acronyms.—Taxonomic material came from the Muséum National d'Histoire Naturelle, Paris (MNHN) and The Natural History Museum, London (BMNH).

Figures.—Images (Figs. 1–4) were captured as multiple “.tif” files using a Polaroid® DMC-1e digital camera attached to a Leica® MZX75 microscope and integrated via Pax-It® software. Multiple files for a given “figure” have generally been used to facilitate “building” a final figure that is far more sharply focused than any single digital image, due to depth of focus limitations. All images were saved to a multi-departmental server on a Local Area Network (LAN) and edited using either Adobe® PhotoShop, version 6.0 software, or JASC® Paint Shop Pro, version 7.0 software. In addition to “building” the final image for a given figure, the touch up process typically involves a number of cut/paste, blend, and erase functions offered by

the software to graphically remove unwanted shadows and background.

Material examined.—The single male of *P. gracilis* examined is certainly a syntype. It could be the only specimen Pic had before him, but as there is no clear indication of this on the specimen labels or in the description, it can not be considered the holotype. Because it was cryptically labeled, I appended a “Syntype” label.

Pogonoceromorphus gracilis: (1 ♂) [1st label]: Guyane, Maroni; [2nd label]: Type (small label appearing to be in Pic’s hand); [3rd label]: *Pogonoceromorphus, gracilis* Pic; [4th label]: SYNTYPE:, *Pogonoceromorphus, gracilis* ♂ Pic, *fide* Daniel K. Young.

The “Maroni” label may refer to the port city of St.-Laurent-du-Maroni, on the Maroni River, between Suriname and French Guiana; 05°29’46”N, 54°02’46”W. It also could refer simply to the Maroni River, or to the eastern State of Maroni, French Guiana.

A second specimen of *Pogonoceromorphus* in the Pic material of unidentified Pyrochroidae might be conspecific with *P. gracilis*. The color is not quite the same; more significantly, however, the vestiture of the prothoracic tibiae is a little different, the elytra are less coarsely punctured in the “Maroni” specimen, and the apex of the fused parameres differs slightly between the two. For the present, however, the specimen is considered conspecific.

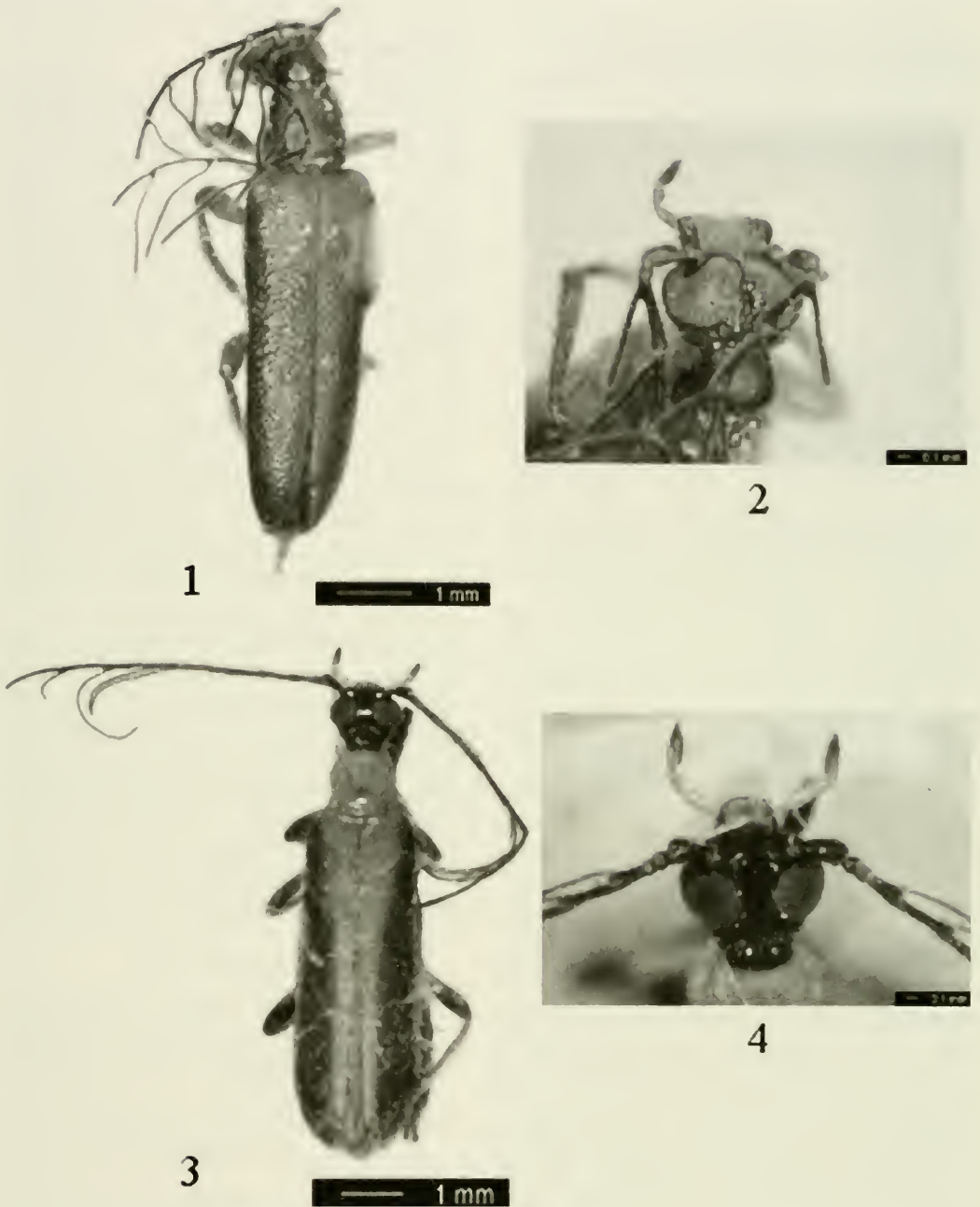
Pogonoceromorphus gracilis? : (1 ♂) [1st label]: Teffé (Lya), Amazonas; [2nd label]: *Dendroides*, probabl; [3rd label]: *Pogonoceromorphus, gracilis*?, Pic ♂, det. Daniel K. Young. [Teffé (= Tefé) is located in central Amazonas, Brazil, along the Amazon River; 03°20’23”S, 64°45’17”W.]

DISCUSSION

The male *P. gracilis* (Figs. 1–2) was discovered in the Pic material at the Muséum National d’Histoire Naturelle, Paris. The point-mounted specimen is in reasonably good condition and bears the locality data

label “Guyane, Maroni”; identical to that provided in the original description (Pic 1921). The strongly, finely, pectinate antennae and nearly holoptic compound eyes are, as Pic noted, somewhat suggestive of the monotypic Russian pyrochroine, *Pogonocerus thoracicus* Fischer (Figs. 3–4), although the eyes of the latter are not nearly as approximate dorsally. However, at closer look, there are also a number of more significant differences. The basal pronotal sulcus described by Pic actually extends laterally onto the hypomera in *P. gracilis*, ending near the coxal cowling. This character is suggestive of Anthicidae as characterized by Ivie (2002). The prothoracic coxal cavities of *Pogonoceromorphus* are widely open externally, but closed internally. This is also more like the condition generally seen in Anthicidae (Crowson 1955). The prothoracic coxal cavities are widely open both externally and internally in pyrochroine Pyrochroidae. The emarginate compound eyes are conspicuously setose between facets, another character fairly common in anthicids (Chandler 2002). The cranial “neck” in *P. gracilis* is about 1/3 the width of the head and coarsely, strigously punctate; the metathoracic coxae are very nearly contiguous mesally; the intercoxal process of the first ventrite has the margins diverging at an angle of distinctly less than 45°. This character set clearly places *P. gracilis* in the anthicid subfamily Eurygeniinae. From these observations, I propose to remove *Pogonoceromorphus* Pic, based upon the type species, *P. gracilis* (by monotypy), from Pyrochroidae (Pyrochroinae) and hereby transfer it to the anthicid subfamily Eurygeniinae.

Having examined Pic’s specimen of *P. gracilis*, it is clearly not congeneric with *P. lauiopalui* Vulcano and Pereira. Presuming that *P. lauiopalui* was correctly assigned to *Pogonoceromorphus*, Lawrence and Newton (1995: 899) commented that, “The Neotropical genus *Pogonoceromorphus* . . . almost certainly belongs to the tenebrionid subfamily Lagriinae.” Although I



Figs. 1–2. *Pogonoceromorphus gracilis* Pic, adult male: 1, habitus; 2, head, dorsal view.
Figs. 3–4. *Pogonocerus thoracicus* Fischer, adult male: 3, habitus; 4, head, dorsal view.

have not examined the type of *P. lauropal-
ui*, Vulcano and Pereira’s well-drawn habi-
tus figure (1972: 30, fig. 1) is very close to
the description of the lagriine tenebrionid

genus *Disema* (*Barsenis*) *sensu* Champion
(1917: 141–142): “The chief characters of
the genus are—the strongly serrate (*Disema*
s. str.) or flabellate (*Barsenis*) ♂-antennae

... and the presence of a depressed opaque area on the outer portion of the elytra ... The eyes in the typical forms are extremely large and contiguous in the male ... remarkable modifications in the structure of one or more of the ♂-tibiae also occurring occasionally ...” In his “lagriid” contribution to the *Genera Insectorum*, Borchmann (1936) retained *Barsenis* Pascoe as generically distinct from *Disema* Mäklin. In his key to genera, *Barsenis* and *Disema* run together to the last couplet. He distinguished the two genera using five characters. The antennae of *Barsenis* were described as branched (= flabellate), while those of *Disema* were said to be strongly serrate. Specimens of *Barsenis* have the apical maxillary palpomere enlarged and subtriangular; it was described as small and cultriform in *Disema*. The pronotum of *Disema* bears scattered large punctures that are lacking in species of *Barsenis*; the elytra of *Disema* widen posteriorly as opposed to being cylindrical in species of *Barsenis*. Males of *Barsenis* were described as usually displaying highly modified tibiae, yet he described those of *Disema* as being “often sexually dimorphic.”

Like *Barsenis* (*sensu* Borchmann) the specimen of *P. lauiopalui* has flabellate antennae, an enlarged, securiform terminal maxillary palpomere (Vulcano and Pereira 1972: 30, figs. 1–2), and modified prothoracic tibiae (Vulcano and Pereira 1972: 30, figs. 1, 6). However, more like Borchmann’s characterization of *Disema*, the pronotum definitely has scattered large punctures and the elytra are widest along the posterior third, not cylindrical. In any case, *P. lauiopalui* is not assignable to *Pogonoceromorphus* Pic. For the present, because of the inconsistencies noted above and because it is beyond the scope of this contribution to further examine generic limits within lagriine Tenebrionidae, I defer to Champion in taking a broader view of *Disema*. Thus, I am transferring *P. lauiopalui* to *Disema* (*Barsenis*): *Disema* (*Barsenis*)

lauiopalui (Vulcano and Pereira), **new combination**.

It is also beyond the scope of this paper to comment on the validity of *D. lauiopalui* as a species, since a number of species have been assigned to *Disema* and *Barsenis*. *Disema lauiopalui* does appear to be related to material I examined at The Natural History Museum, London, identified as *Disema* (*Barsenis*) *fulvipes* (Pascoe). Unfortunately, Pascoe’s (1887) figure accompanying his original description lacks sufficient detail to be useful in comparing the two.

ACKNOWLEDGMENTS

I am grateful to Max Barclay, Martin Brendell, and Malcolm Kerley (BMNH) for their kind assistance during my visits. I also extend thanks to Claude Girard (MNHN) for an extended loan of material critical to this study. Preliminary digital images and final figures were captured and produced by Michael Young, and electronic formatting of the plates was produced by Craig Brabant; I am most grateful for their assistance. This research was supported in part by grants from the National Science Foundation (BSR-9006342), the University of Wisconsin Graduate School (900159), and the University of Wisconsin’s Natural History Museums Council Small Grants Program.

LITERATURE CITED

- Blackwelder, R. E. 1945. Checklist of the Coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 3. Smithsonian Institution. Bulletin of the United States National Museum 185: 343–550.
- Blair, K. G. 1928. Pars. 99: Pyrochroidae, pp. 1–14. In Schenkling, S., ed. Coleopterorum Catalogus, Vol. 17. Berlin.
- Borchmann, F. 1936. Coleoptera Fam. Lagriidae, pp. 1–555. In Wytzman, P., ed. Genera Insectorum. Fasc. 204. L. Desmet-Verteneuil, Brussels.
- Champion, G. C. 1917. Notes on tropical American Lagriidae, with descriptions of new species. Entomologist’s Monthly Magazine 53: 132–154.
- Chandler, D. S. 2002. Family Anthicidae, pp. 549–558. In Arnett, R. H. Jr., M. C. Thomas, P. E. Skelley, and J. H. Frank, eds. American Beetles, Vol. 2. CRC Press, Boca Raton, Florida.
- Crowson, R. A. 1955. The Natural Classification of the

- Families of Coleoptera. Nathanial Lloyd, London, 187 pp.
- Ivie, M. A. 2002. Keys to families of beetles in America north of Mexico, pp. 816–835. *In* Arnett, R. H. Jr., M. C. Thomas, P. E. Skelley, and J. H. Frank, eds. *American Beetles*, Vol. 2. CRC Press, Boca Raton, Florida.
- Lawrence, J. F. and A. F. Newton, Jr. 1995. Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names). pp. 779–1006. *In* Pakaluk, J. and S. A. Slipinski, eds. *Biology, Phylogeny, and Classification of Coleoptera: Papers Celebrating the 80th Birthday of Roy A. Crowson*. Muzeum i Instytut Zoologii PAN, Warszawa.
- Pascoe, F. P. 1887. Notes on Coleoptera, with descriptions of new genera and species.—Part VI. The *Annals and Magazine of Natural History, including Zoology, Botany, and Geology* (5)20: 8–20, plate I.
- Pic, M. 1921. Nouveautés diverses. *Mélanges Exotico-Entomologiques* 33: 1–32.
- Vulcano, M. A. and F. S. Pereira. 1972. Ocorrência da família Pyrochroidae Leach 1815 (Coleoptera) no Brasil, com descrição de uma espécie nova. *Arquivos do Instituto Biológico, São Paulo* 39: 27–34.
- Young, D. K. 1999. Transfer of the Taiwanese *Pseudopyrochroa umenoi* and the Japanese *Pseudopyrochroa amamiana* to *Pseudodendroides* (Coleoptera: Pyrochroidae: Pyrochroinae). *The Pan-Pacific Entomologist* 75: 1–7.
- . 2002. Family Pyrochroidae. pp. 540–543. *In* Arnett, R. H. Jr., M. C. Thomas, P. E. Skelley, and J. H. Frank, eds. *American Beetles*, Vol. 2. CRC Press, Boca Raton, Florida.
- . 2004a. *Himalapyrochroa gibbosa*, a new genus and species of fire-colored beetle (Coleoptera: Pyrochroidae: Pyrochroinae) from Darjeeling, India. *Oriental Insects* 38: 189–196.
- . 2004b. *Dendroidopsis* and *Frontodendroidopsis*: Two new Asian genera of fire-colored beetles (Coleoptera: Pyrochroidae: Pyrochroinae), with descriptions of two new species of *Dendroidopsis*, and lectotype designations for *Dendroides assamensis* Blair and *Pseudopyrochroa binhana* Pic. *Oriental Insects* 38: 197–217.